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10/625,383	07/23/2003	Christopher A. Adkins	2002-0527.02	2361
21972	7590	10/13/2006	EXAMINER	
LEXMARK INTERNATIONAL, INC. INTELLECTUAL PROPERTY LAW DEPARTMENT 740 WEST NEW CIRCLE ROAD BLDG. 082-1 LEXINGTON, KY 40550-0999			AUGUSTIN, EVENS J	
		ART UNIT		PAPER NUMBER
		3621		
DATE MAILED: 10/13/2006				

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

MAILED

Application Number: 10/625,383

OCT 13 2006

Filing Date: July 23, 2003

Appellant(s): ADKINS ET AL.

GROUP 3600

Paul C. Gosnell
Taylor & Aust, P.C.
For Appellant

EXAMINER'S ANSWER

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

<u>US Patent/Publication Number</u>	<u>Inventor</u>
1-US 2002/0012541	Takemoto
2-US 4967207	Ruder
3-US 6816968	Walmsley

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(b) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-24, 29-54, 59-70 and 75-86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemoto et al. (U.S 20020012541) over Ruder (U.S 4,967,207)

As per claims 1-24, 29-54, 59-70 and 75-86, Takemoto et al. discloses a method comprising of:

- Image forming apparatus with licensed cartridge/toner (page 7, paragraph 124)
- Communicating to a license generating server identification information (page 9, paragraph 151). Since the server stores the identification information and makes use of

it, it is inherent that the server contains a database. The identification information can be in the form of a serial number (page 8, paragraph 140)

- Receiving from the server license information from the server (page 10, paragraph 169).
The license information is the form of a encryption key (page 17, paragraph 266)
- Comparing license information with license information stored in the ink cartridge, and reconcile the information (page 11, paragraph 181, page 17, paragraph 268)
- Determining if the toner level has fallen below a predetermined threshold (page 15, paragraphs 240-241, page 5, paragraph 98)
- The comparing of license information is performed by cartridge/printer (page 11, paragraph 181, page 10, paragraphs 170-175)
- Communicating to the user the status of the transaction and prompting the user for identification related information in a repeated fashion (page 14, paragraphs 223-226)
- The transaction is terminated if license/identification information can not be reconciled (page 10, paragraph 175)
- The comparison of the license/identification information is done between the printer and cartridge (page 11, paragraphs 181-186)
- Printer transmitting the serial number to the server (page 8, paragraph 149)
- Server transmitting the license (verification) information (page 13, paragraph 207)
- Reconciling license information with the printer/toner (page 11, paragraph 181)
- Associating memory with the cartridge (page 14, paragraph 223)
- Comparing identification/serial number in the server to establish a corresponding license information (page 9, 151)

- The printer module also contains memory (page 9, paragraph 158)

Takemoto et al. did not explicitly describe a method that uses a surplus of toner to refill the cartridge. However, Ruder discloses a system that has an ink reservoir (surplus), which can be allocated during normal operation (column 1, lines 6-9). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the appellant's invention to use to allocate a surplus of toner/ink in order to increase the amount of toner/ink available in a printer, and to also to provide more toner/ink and not unduly increase the cost and complexity of the printer (column 2, lines 38-45).

3. Claims 25-28, 55-58, 71-74 and 87-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemoto et al. (U.S 20020012541) over Simon Robert (U.S US 6,816,968) Takemoto et al. did not explicitly describe a method that uses HMAC algorithm. However, Simon Robert discloses a system that uses HMAC algorithm (column 57, line 63). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the appellant's invention to use HMAC algorithm because it is a proven and secure way of transmitting information in an unreliable medium (column 13, lines 29-39).

(10) Response to Argument

Argument 1: Prior Art by Takemoto does not teach or suggest **virtual replenishing of imaging substance (toner)**, with image processing device (printer) containing an actual amount and surplus amount

Response 1: The United States Patent And Trademark Office (USPTO) Respectfully disagrees with the appellant's interpretation of the prior art. The USPTO contends that the prior art teaches the of virtual toner replenishment. A closer look at the aspect of "*virtual*" toner replenishment, the appellant's specification describes this process as "making available for use at least a portion of the surplus amount of imaging substance in supply item" (page 10, lines 6-7, page 14, lines 18-19). Additionally, according to the Merriam-Webster's dictionary, the word *virtual* has the definition of "being on or simulated on a computer or computer network, as occurring or existing primarily online". Accordingly, based on the information provided by the appellant's specification, and what is well established in the art, the prior art by Takemoto **teaches the aspect of having the functions of a toner cartridge controlled in accordance with licensing of toner via network (page 14, par. 220). The network can be a Local Area Network (LAN), Wide Area Network (WAN), and the Internet (page 13, par. 205).**

When toner cartridge is loaded into the printer, the system determines or verifies whether or not the cartridge was licensed (page 14, par. 222-223). The licensing server administering the functions of the licensed toner can administer "provisional license" of toner for a certain period of time (say two month) (page 15, par. 232, 238). The toner cartridge **contains an actual/accommodating/licensed amount and a residual amount** of toner (page 4, par. 73). Since the appellant's specification does not provide one skilled for a specific definition of surplus, the general definition of **surplus** used in the art is "**the amount that remains when use or need is satisfied**" (per Merriam-Webster dictionary). In this case, **the licensed amount is the amount to be used for licensed period of time and remaining toner is called the residual.**

Residual is therefore equivalent to **surplus**. Once the specific period has elapsed, the system gives the user the rights to use 70% the residual (page 15, par. 240). Along the way, the system **prompts** the user a chance to obtain license for the toner amount, but if the user does not obtain licensing for the toner, **the system will stop operation of the toner and will again prompt the user to obtain licensing** (page 15, par. 241-242, page 16, par. 243).

Even if the appellant's definition of surplus were to mean an additional toner cartridge as the residual or surplus toner, the prior art by Ruder describes the aspect of having two toner cartridges being replenished automatically.

Argument 2: Takemoto does not disclose, teach or suggest **comparing the toner's serial number with the plurality of serial numbers in a database**

Response 2: For the license server to process or administer the license of the toner cartridge, it **receives identification information (first data) from the cartridge** (page 13, par. 207-208). The identification information is the serial number of the toner cartridge (page 13, par. 209). The license server **compares the received serial number (first data) with serial numbers that correspond to the actual license information to the toner cartridge requesting licensing (second data)** (page 13, par. 211, page 14, par. 223). It is well established in the art that a database is collection of data organized search and retrieval. **Inherently the aspect of comparing data received from a network with data in a server has to be done via database.**

Argument 3: Prior art by Takemoto does not teach that **license information (second data) includes a verification key**

Response 3: According to the appellant's specification, the verification key is mechanism used to authenticate the serial number (page, 9, par. 32-33, page 10, par. 31-32). In this case, the **license information, which can be numbers or signs, indicates "license available" or "not licensed" type of data** (page 9, par. 150-151, page 14, 223). As indicated previously, the license information has to reconcile with corresponding identification information of the toner. The license information is then encrypted for added security in case it gets intercepted from the network (page 7, par. 121, page 11, par. 176). **Therefore, licensing information is the mechanism used, just like the verification key described by appellant, to authenticate or verify the serial number of the toner.**

Argument 4: The prior art do not teach the aspect obtaining the license **being done on a repeated basis**

Response 4: The licensing server administering the functions of the licensed toner can administer "provisional license" for a certain period of time (say two month) (page 15, par. 232, 238). The toner cartridge contains actual/accommodating/licensed amount and a residual amount of toner (page 4, par. 73). Since the appellant's specification does not provide one skilled for a specific definition of surplus, the general definition of surplus used in the art is "the amount that remains when use or need is satisfied" (per Merriam-Webster dictionary). In this case, the

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licensed amount is the amount to be used for licensed period of time and remaining toner is called the residual. Once the specific period has elapsed, the system gives the user the rights to use 70% the residual (page 15, par. 240). Along the way, the system checks for licensing again at 50% (**repeated basis**), **prompts the user a chance to obtain license** for the toner amount, but if the user does not obtain licensing for the toner, **the system will stop operation of the toner and will again prompt the user to obtain licensing** (page 15, par. 241-242, page 16, par. 243).

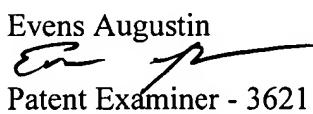
The system clearly states that aspect of checking for licensing is done on a repeated basis (pages 15-16, par. 242-243).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Evens Augustin

Patent Examiner - 3621

10/02/06


ANDREW J. FISCHER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Conferees:

Sam Sough - Supervisor Patent Examiner 

Andrew Fischer - Supervisor Patent Examiner